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University of Dayton, Central State University receive NSF grant to give STEM teachers international experience for their classrooms

University of Dayton

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News

News

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TUESDAY OCTOBER 1, 2019

University of Dayton, Central State University receive NSF grant to give STEM teachers international experience for their classrooms

The University of Dayton and Central State University are looking for local middle and high school STEM teachers to participate in a yearlong National Science Foundation program. The teachers will work with a community partner to create solutions for issues in developing countries using locally available technology. They will be paired with a faculty mentor, travel internationally to work on a project with a partner agency, then create curriculum for their classrooms. The application deadline is Oct. 15.

"We hope, ultimately, the lessons and knowledge these teachers bring back to their classrooms excites their students and encourages them to pursue engineering careers," said Kellie Schneider, University of Dayton associate professor and program administrator. "The program administrators are especially interested in attracting participants who teach students who are underrepresented in engineering and/or work in underserved schools."

The Research Experiences for Teachers program runs from January through December. Teachers will take hands-on STEM learning and real-world engineering research and apply it during a summer international immersion with the University of Dayton Engineers in Technical Humanitarian Opportunities of Service Learning (ETHOS). The ETHOS program has been placing UD students in international technical immersions for 15 years. After the trip, curriculum coach Marjori Langston will help the teachers incorporate what they've learned into their curriculum.

"Guided by a curriculum coach, teachers will engage in STEM curriculum development to connect skills with age-

appropriate academic content standards for their classrooms," said Leanne Petry, Central State University associate professor of chemistry and program administrator. "With our new global economy and changing demographics, it is imperative that today's teachers possess enhanced intercultural competencies to guide and educate the next generation of STEM professionals."

The University of Dayton and Central State University will receive \$598,000 to run the program for three years.

Teachers receive a \$5,500 stipend plus travel expenses.

[Click here for more information and to apply.](#)

Examples of ongoing research and immersion opportunities include:

- Printable Prosthetics — Develop and manufacture 3-D printed prosthetics and orthotics using new flexible elastomers with a research partner in Santiago, Chile.
- Biomass Combustion — Learn the physics and chemistry of biomass combustion processes plus the modeling and design of biomass cook stoves. Field test results with Burn Design Labs in Kenya.
- Human Waste Composting — Improve lives in rural Nicaragua with composting latrines.
- Food Collection and Redistribution — Improve the supply chain and optimize the logistics of redistributing food for a food bank in Peru.
- Sustainable Community Infrastructure — Improve access to potable water and road access for rural communities in Cameroon and Malawi.
- Decrease Health Disparities — Identify and develop agriculture and ecological services to reduce exposure to environmental toxins in India.

"The ETHOS Center and its international partnerships, together with the support of the National Science Foundation, make it possible for local teachers to take part in a potentially life-changing experience," Schneider said.

For more information or interviews, contact Shawn Robinson, associate director of news and communications, at 937-229-3391 or srobinson1@udayton.edu.

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300 College Park
Dayton, Ohio
45469
937-229-1000

info@udayton.edu

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